Amendments to the Claims:

1. (Currently Amended) A compressor for compressing air and gaseous fuel, comprising:

a rotatable shaft;

a compressor wheel mounted on the shaft, the wheel having a plurality of blades affixed thereto;

a bearing casing defining an interior space;

a bearing mounted in the bearing casing and rotatably supporting the shaft;

a compressor housing surrounding the wheel, the compressor housing defining a main gas flow path, the compressor housing having a fixed wall immediately adjacent to and spaced from a surface of the compressor wheel, said surface extending from a location adjacent the main gas flow path generally radially inwardly toward the bearing casing;

the compressor housing and bearing casing defining a leakage pathway from the main gas flow path of the compressor into the interior of the bearing casing, at least part of the leakage pathway being defined between the surface of the compressor wheel and the fixed wall of the compressor housing; and

a sealing arrangement located in the leakage pathway, the sealing arrangement comprising a hydraulic resistance element disposed between the surface of the compressor wheel and the fixed wall of the compressor housing, ~~a portion of the leakage pathway that extends from the hydraulic resistance element to the bearing casing being free of any further hydraulic resistance elements,~~ and a pressurized air supply duct leading through the compressor housing into ~~said portion of~~ the leakage pathway at a location between the bearing casing and the hydraulic resistance element, and wherein the leakage pathway includes a portion that extends from the hydraulic resistance element to the bearing casing and that is free of any further hydraulic resistance elements;

wherein the compressor is structured and arranged to compress a mixture of fuel and air fed into the compressor; and

wherein the sealing arrangement is structured and arranged to prevent fuel from leaking via the leakage pathway into the bearing casing and thereby escaping into the atmosphere, by virtue of the sealing arrangement including a source of pressurized air that is free of fuel and that

has a pressure exceeding that in the main gas flow path, said source being arranged to feed the pressurized fuel-free air through the pressurized air supply duct into the leakage pathway such that the pressurized fuel-free air prevents fuel from flowing from the main gas flow path past the hydraulic resistance element and into the bearing casing.

2. (Original) The compressor of claim 1, wherein the hydraulic resistance element comprises a labyrinth seal.

3. (Original) The compressor of claim 1, further comprising an oil supply duct leading through the bearing casing into the interior thereof for supplying lubricating oil to the bearing, and an oil drain leading out from the interior of the bearing casing for evacuating air and oil from the bearing casing.

4. (Original) The compressor of claim 1, wherein the compressor housing defines an inlet duct through which air is led into the compressor, and further comprising a fuel supply duct leading into the inlet duct for supplying fuel into the compressor.

5. (Original) A compressor for compressing air and gaseous fuel, comprising:

a rotatable shaft;

a compressor wheel mounted on the shaft, the wheel having a plurality of blades affixed thereto;

a bearing casing defining an interior space;

a bearing mounted in the bearing casing and rotatably supporting the shaft;

a compressor housing surrounding the wheel, the compressor housing defining a main gas flow path, the compressor housing having a fixed wall immediately adjacent to and spaced from a surface of the compressor wheel, said surface extending from a location adjacent the main gas flow path generally radially inwardly toward the bearing casing;

the compressor housing and bearing casing defining a leakage pathway from the main gas flow path of the compressor into the interior of the bearing casing, a portion of the leakage pathway being defined between the surface of the compressor wheel and the fixed wall of the compressor housing; and

a sealing arrangement located in said portion of the leakage pathway, the sealing arrangement comprising a hydraulic resistance element disposed between the surface of the compressor wheel and the fixed wall of the housing, a plurality of auxiliary blades mounted on the surface of the compressor wheel and spaced radially outwardly from the hydraulic resistance element such that a cavity is defined between the hydraulic resistance element and the auxiliary blades, and a pressurized air supply duct leading through the compressor housing into the cavity.

6. (Original) The compressor of claim 5, wherein the hydraulic resistance element comprises a labyrinth seal.

7. (Original) The compressor of claim 5, further comprising an oil supply duct leading through the bearing casing into the interior thereof for supplying lubricating oil to the bearing, and an oil drain leading out from the interior of the bearing casing for evacuating air and oil from the bearing casing.

8. (Original) The compressor of claim 5, wherein the compressor housing defines an inlet duct through which air is led into the compressor, and further comprising a fuel supply duct leading into the inlet duct for supplying fuel into the compressor.

9. (Currently Amended) A compressor for compressing air and gaseous fuel, comprising:

a rotatable shaft;

a compressor wheel mounted on the shaft, the wheel having a plurality of blades affixed thereto;

a bearing casing defining an interior space;

a bearing mounted in the bearing casing and rotatably supporting the shaft;

a compressor housing surrounding the wheel, the compressor housing defining a main gas flow path, the compressor housing having a fixed wall immediately adjacent to and spaced from a surface of the compressor wheel, said surface extending from a location adjacent the main gas flow path generally radially inwardly toward the bearing casing;

the compressor housing and bearing casing defining a leakage pathway from the main gas flow path of the compressor into the interior of the bearing casing, a portion of the leakage

pathway being defined between the surface of the compressor wheel and the fixed wall of the compressor housing; and

a sealing arrangement located in said portion of the leakage pathway, the sealing arrangement comprising first, second, and third hydraulic resistance elements disposed between the surface of the compressor wheel and the fixed wall of the compressor housing, the second hydraulic resistance element spaced radially outwardly of the first hydraulic resistance element such that a first cavity is defined therebetween, the third hydraulic resistance element spaced radially outwardly of the second hydraulic resistance element such that a second cavity is defined therebetween, a pressurized air supply duct leading through the compressor housing into the first cavity, and a recirculation duct leading from the second cavity back into **the** compressor inlet for recirculating back to the compressor inlet any air and gaseous fuel that leaks past the third hydraulic resistance element into the second cavity.

10. (Original) The compressor of claim 9, wherein the hydraulic resistance elements comprise labyrinth seals.

11. (Original) The compressor of claim 9, further comprising an oil supply duct leading through the bearing casing into the interior thereof for supplying lubricating oil to the bearing, and an oil drain leading out from the interior of the bearing casing for evacuating air and oil from the bearing casing.

12. (Original) The compressor of claim 9, further comprising a fuel supply duct leading into the compressor inlet for supplying fuel into the compressor.

13. (Currently Amended) A compressor for compressing air and gaseous fuel, comprising:

a rotatable shaft;

a compressor wheel mounted on the shaft, the wheel having a plurality of blades affixed thereto;

a bearing casing defining an interior space;

a bearing mounted in the bearing casing and rotatably supporting the shaft;

a compressor housing surrounding the wheel, the compressor housing defining a main gas flow path, the compressor housing having a fixed wall immediately adjacent to and spaced from a surface of the compressor wheel, said surface extending from a location adjacent the main gas flow path generally radially inwardly toward the bearing casing;

the compressor housing and bearing casing defining a leakage pathway from the main gas flow path of the compressor into the interior of the bearing casing, at least part of the leakage pathway being defined between the surface of the compressor wheel and the fixed wall of the compressor housing; and

a sealing arrangement located in the leakage pathway, the sealing arrangement comprising a plurality of auxiliary blades mounted on the surface of the compressor wheel proximate the fixed wall of the compressor housing, the auxiliary blades being structured and arranged to draw air radially outwardly therethrough and raise the pressure of the air and inject the air into the main gas flow path of the compressor, the leakage pathway defining a portion that extends radially inwardly from the auxiliary blades into the bearing casing;

wherein the sealing arrangement is structured and arranged to prevent fuel from leaking via the leakage pathway into the bearing casing and thereby escaping into the atmosphere, by virtue of the sealing arrangement including a pressurized air supply duct leading through the compressor housing into said portion of the leakage pathway, and a source of pressurized air that is free of fuel and that has a pressure exceeding that in the main gas flow path, said source being arranged to feed the pressurized fuel-free air through the pressurized air supply duct into the leakage pathway such that the pressurized fuel-free air prevents fuel from flowing from the main gas flow path past the hydraulic resistance element and into the bearing casing.

14. (Canceled)

15. (Currently Amended) A compressor for compressing air and gaseous fuel, comprising:

a rotatable shaft;

a compressor wheel mounted on the shaft, the wheel having a plurality of blades affixed thereto;

a bearing casing defining an interior space;

a bearing mounted in the bearing casing and rotatably supporting the shaft;

a compressor housing surrounding the wheel, the compressor housing defining a main gas flow path, the compressor housing having a fixed wall immediately adjacent to and spaced from a surface of the compressor wheel, said surface extending from a location adjacent the main gas flow path generally radially inwardly toward the bearing casing;

the compressor housing and bearing casing defining a leakage pathway from the main gas flow path of the compressor into the interior of the bearing casing, at least part of the leakage pathway being defined between the surface of the compressor wheel and the fixed wall of the compressor housing; and

a sealing arrangement located in the leakage pathway, the sealing arrangement comprising first and second hydraulic resistance elements disposed between the surface of the compressor wheel and the fixed wall of the compressor housing, the second hydraulic resistance element spaced radially outwardly of the first hydraulic resistance element such that a cavity is defined therebetween, the leakage pathway having a portion that extends radially inwardly from the first hydraulic resistance element into the bearing casing, the sealing arrangement further comprising a pressurized air supply duct leading through the compressor housing into said portion of the leakage pathway, and a recirculation duct leading from the cavity back into **the** compressor inlet for recirculating back to the compressor inlet any air and gaseous fuel that leaks past the second hydraulic resistance element into the cavity.

16. (Canceled)

17. (Original) A method for sealing a compressor used for compressing air and gaseous fuel such that substantially no fuel escapes from the compressor, wherein the compressor defines a leakage pathway that leads from a main gas flow path of the compressor generally radially inwardly into a bearing casing of the compressor, a portion of the leakage pathway being defined between a surface of a compressor wheel and a wall of a housing of the compressor, the method comprising the steps of:

providing a hydraulic resistance element disposed between the surface of the compressor wheel and the wall of the compressor housing, and a plurality of auxiliary blades on the surface of the compressor wheel radially outwardly of the hydraulic resistance element such that a cavity is defined between the hydraulic resistance element and the auxiliary blades;

supplying pressurized air that is free of fuel into the cavity at a pressure greater than that in the bearing casing but less than that in the main gas flow path such that a first portion of the pressurized air flows inwardly past the first hydraulic resistance element into the bearing casing; and

drawing a second portion of the pressurized air through the auxiliary blades such that the auxiliary blades further pressurize the air and feed the air into the main gas flow path thereby preventing any air and gaseous fuel from leaking into the bearing casing.

18. (Original) A method for sealing a compressor used for compressing air and gaseous fuel such that substantially no fuel escapes from the compressor, wherein the compressor defines a leakage pathway that leads from a main gas flow path of the compressor generally radially inwardly into a bearing casing of the compressor, a portion of the leakage pathway being defined between a surface of a compressor wheel and a wall of a housing of the compressor, the method comprising the steps of:

providing first, second, and third hydraulic resistance elements disposed between the surface of the compressor wheel and the wall of the compressor housing, the second hydraulic resistance element spaced radially outwardly of the first hydraulic resistance element such that a first cavity is defined therebetween, the third hydraulic resistance element spaced radially outwardly of the second hydraulic resistance element such that a second cavity is defined therebetween;

supplying pressurized air that is free of fuel into the first cavity at a pressure greater than that in the bearing casing but less than that in the main gas flow path such that a first portion of the pressurized air flows inwardly past the first hydraulic resistance element into the bearing casing, while a second portion of the pressurized air flows outwardly past the second hydraulic

resistance element into the second cavity, a portion of air and gaseous fuel also leaking from the main gas flow path past the third hydraulic resistance element into the second cavity; and

recirculating the air and fuel from the second cavity back to an inlet of the compressor, thereby preventing any air and gaseous fuel from leaking into the bearing casing.

19. (Currently Amended) A method for compressing air and gaseous fuel, comprising the steps of:

feeding air and fuel into a compressor having a compressor wheel that rotates within a main gas flow path of the compressor, the compressor wheel supporting a plurality of blades for compressing the air and fuel; and

supplying pressurized air into a leakage pathway defined between the compressor wheel and a housing of the compressor, which leakage pathway leads from the main gas flow path into a bearing area of the compressor, the pressurized air being supplied at a pressure sufficient to ensure that the air and fuel cannot flow from the main gas flow path through the leakage pathway into the bearing area;

wherein the compressor includes an air bearing that employs pressurized air, a portion of the pressurized air for the air bearing flowing out into the leakage pathway so as to prevent flow of fuel into the bearing area.

20. (Canceled)

21. (Original) The method of claim 19, wherein the compressor includes a static air bearing that employs pressurized air, and wherein pressurized air from an external source is supplied into the leakage pathway and a portion of said pressurized air flows into the air bearing and thereby reduces or eliminates a need for a separate air bearing air supply.

22. (Original) The method of claim 19, wherein the compressor includes a magnetic bearing, and during compressor start-up a portion of the pressurized air supplied into the leakage pathway flows into the magnetic bearing to protect the bearing.

23. (Original) The method of claim 19, wherein the compressor includes a magnetic bearing, and during compressor shut-down a portion of the pressurized air supplied into the leakage pathway flows into the magnetic bearing to protect the bearing.